

George Sharp

Small Arm Flat Bed Machines Classes, 1800 and 1900.

Directions
and
Price List of Parts.

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Remick & Thurston

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Chicago, Illinois,
Union Special Machine Company,
October, 1906.

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Class 1800

Description of Small Arm Flat Bed Machines, with Feed Cap

The Class Number is stamped on the name plate, and represents a type of machines subdivided into several styles.

The Style Number consists of the class number and a letter, and is given only in the catalogue. It represents a machine as fitted for a designated kind of work. To aid the identification of a machine, the catalogue numbers of the presser foot, throat plate, and looper have been included in the description of each style.

Style.

1800 A—For seaming bags; single needle, double thread stitch, maximum length of stitch, $\frac{1}{3}$ inch. Presser Foot No. 65 X, Throat Plate No. 112 X, and Looper No. 26 X.

1800 B—For seaming bags; single needle, single thread stitch, maximum length of stitch, $\frac{1}{3}$ inch. Presser Foot No. 65 X, Throat Plate No. 112 Y, and Looper No. 26 Y.

1800 C—For seaming small cotton bags; single needle, double thread stitch, maximum length of stitch, $\frac{1}{4}$ inch. Presser Foot No. 65 Y, Throat Plate No. 0112, and Looper No. 26 X.

1800 D—For seaming small cotton bags; single needle, single thread stitch, maximum length of stitch, $\frac{1}{4}$ inch. Presser Foot No. 65 Y, Throat Plate No. Q112, and Looper No. 26 Y.

1800 E—For seaming bags; double needle stitch, one under thread, maximum length of stitch, $\frac{1}{3}$ inch. Presser Foot No. 65 Z, Throat Plate No. 112 Z, and Looper No. 26 X.

1800 F—For sewing fringe and border to rugs; single needle, double thread stitch, maximum length of stitch, $\frac{1}{3}$ inch. Presser Foot No. 1827 A, Throat Plate No. 1828, and Looper No. 26 X.

Class 1900

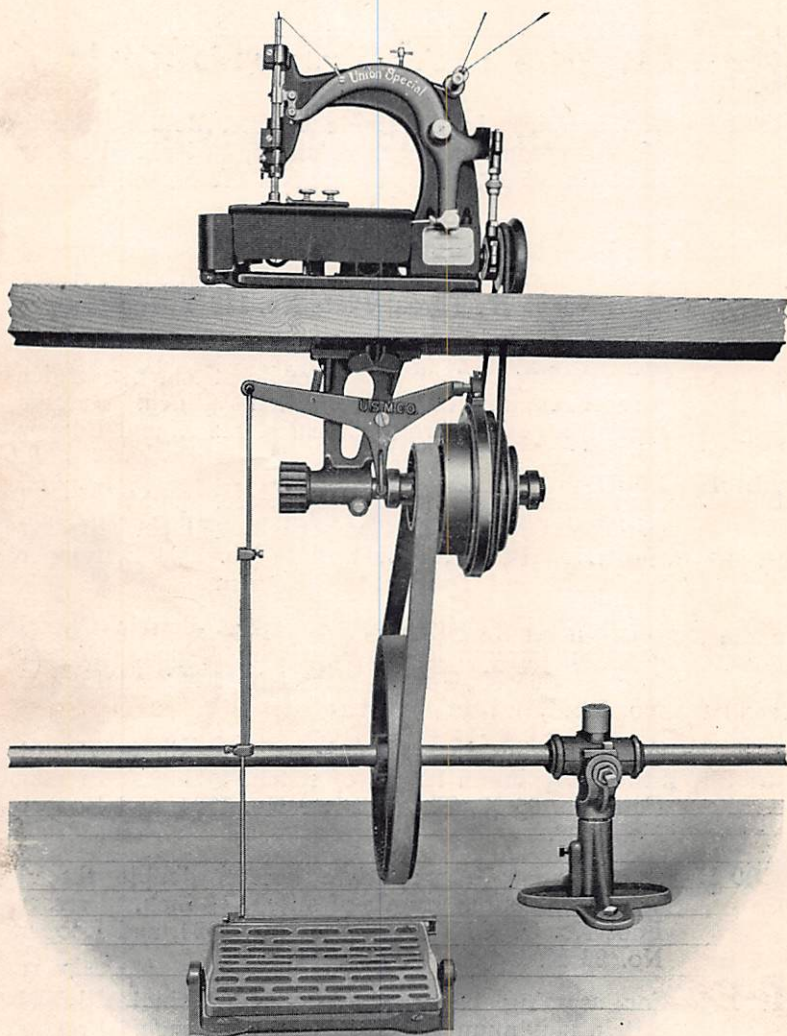
Description of Small Arm Flat Bed Machines, without Feed Cap

Style.

- 1900 A—For seaming bags; single needle, double thread stitch; maximum length of stitch, $\frac{1}{3}$ inch. Presser Foot No. 65 X, Throat Plate No. 112 X, and Looper No. 26 X.
- 1900 B—For seaming bags; single needle, single thread stitch, maximum length of stitch, $\frac{1}{3}$ inch. Presser Foot No. 65 X, Throat Plate No. 112 Y, and Looper No. 26 Y.
- 1900 C—For seaming bags; double needle stitch, one under thread, maximum length of stitch, $\frac{1}{3}$ inch. Presser Foot No. 65 Z, Throat Plate No. 112 Z, and Looper No. 26 X.
- 1900 D—For hemming bags; single needle, double thread stitch, maximum length of stitch, $\frac{1}{2}$ inch. Presser Foot No. 1920 D, Throat Plate No. 1924 E, Looper No. 26 X, and Top Feed Mechanism.
- 1900 F—For hemming bags; single needle, double thread stitch, maximum length of stitch, $\frac{1}{2}$ inch. Presser Foot No. 65 X, Throat Plate No. 1924, and Looper No. 26 X.
- 1900 G—For hemming bags; single needle, single thread stitch, maximum length of stitch, $\frac{1}{2}$ inch. Presser Foot No. 65 X, Throat Plate No. 1924, and Looper No. 1908.
- 1900 H—For seaming bags; single needle, double thread stitch, maximum length of stitch, $\frac{1}{2}$ inch. Presser Foot No. 65 X, Throat Plate No. 1924, and Looper No. 26 X.
- 1900 J—For seaming bags; single needle, single thread stitch, maximum length of stitch, $\frac{1}{2}$ inch. Presser Foot No. 65 X, Throat Plate No. 1924, and Looper No. 1908.

SMALL ARM FLAT BED MACHINES—CLASSES 1800 & 1900

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STYLE 1800 A.—READY TO OPERATE.

SMALL ARM FLAT BED MACHINES

CLASSES, 1800 AND 1900

DIRECTIONS

Installation

Tables It is not found economical to build and transport tables used for bag sewing machines; but, we are prepared to furnish blue prints which will enable a local carpenter to construct tables at the lowest possible expense and according to the most approved design.

Pulleys Line shaft pulleys are made with an inch and three-sixteenth bore, and an inch and a half face; the diameters range in inch sizes from eight to fifteen inches, both inclusive. The twelve-inch size is the most commonly used.

The transmitter comprises two cone-pulleys; the brake pulley having three steps, and the loose pulley, two steps.

Belts A flat belt carries power from the line shaft to the transmitter; and a round belt, from the transmitter to the sewing machine. The belts must be arranged so as to turn the sewing machine pulley in the direction indicated by the arrow in the sectional diagram. If necessary to cross a belt, the round belt should be crossed.

SMALL ARM FLAT BED MACHINES—CLASSES, 1800 & 1900

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Speed Ordinarily, the speed recommended is 2,300 Revolutions Per Minute. This can be secured conveniently by running the line shaft 275 R. P. M., and using a twelve-inch line shaft pulley, with both belts running on the fastest steps of the transmitter pulleys. This estimate includes an allowance of 6% for slipping of belts.

Sewing Machine Being thoroughly tested and accurately adjusted before leaving our factory, Union Special Machines are shipped in perfect working trim. The illustration, page 6, gives a good idea of the sewing machine power transmitter, and foot treadle as they are set up for operation.

The space apportioned for each machine is measured from needle to needle; and, in order to prevent bags from becoming entangled with the belt of the adjoining machine, this space should be approximately twelve inches greater than the length of the largest bag to be sewed. If intended to make small bags exclusively, the space from needle to needle can, if necessary, be reduced to forty-eight inches, which is about as close as can be safely recommended.

The sewing machine head should be placed so that the front edge of the cloth plate will come about one inch back from the front edge of the table, where it should be fastened with the thumb-screw furnished for that purpose. Afterwards, when the work of setting up is completed, a second screw should be placed at the rear right-hand corner.

Directions

Transmitter Use $1\frac{1}{4}$ -inch screws to secure the transmitter to the table unless it is made of exceptionally hard wood.

The transmitter should be placed far enough back under the table to be out of the way of the operator's clothing, that is, the front edge should be about three or four inches back of the machine thumb-screw. Special care must be observed to make sure that the largest step of the transmitter brake pulley is directly under the groove of the machine pulley, and that the transmitter is in proper alignment with the line shaft. A very good method is as follows:

Place pulley on line shaft, but do not tighten it. Put in only the front right-hand screw to hold the transmitter temporarily. Turn the transmitter in alignment with the line shaft by sighting across the two pulleys. Insert second screw diagonally opposite the one already in. Measure length of flat belt required to go around the line shaft pulley and transmitter pulley. Join the two ends of the flat belt by one of the malleable iron belt lacings provided for that purpose. This lacing is driven into one end of the belt on the floor and into the other end on the transmitter loose pulley. See that the lacing conforms to the curvature of the pulley and that the teeth are well clinched. Turn pulleys by hand to note whether the belt runs true; this is the best proof of proper alignment.

Should the belt fail to run so that it centers on the crown of both pulleys, the error may be rectified by removing the rear left-hand screw and turning the transmitter as required. In some instances, owing to the line shaft not being in proper alignment with the

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under side of the table, it will be necessary to insert a shim between either the right or left end of the transmitter frame and the table. Being now placed in proper relation, both with the line shaft and sewing machine, the transmitter should be permanently secured to the table by placing screws in the remaining holes. The rear left-hand screw should be put in last, otherwise it would have a tendency to draw the transmitter back to its original position. Tighten the line shaft pulley securely to the shaft.

To locate the holes for the round belt, it will be found of great assistance to use a pointed 9/32-inch rod. By placing it in the groove of the machine pulley, it can be made to take the slant which the round belt requires, and a carpenter's bevel-square might be advantageously used to take the required angle and serve as a guide for the auger. The diameter of the holes should not exceed one inch.

The foot treadle should be set so that the center is directly under the needle, and the front edge should be directly under the front edge of the table. The incline of the treadle can be adjusted to suit the operator's convenience by means of the pitman. The pitman rod need not necessarily hang in a vertical position.

Operating

Simplicity In isolated factories where operators have but scant opportunity to observe the working of any kind of machinery, they readily adapt themselves to Union Specials. Accordingly,

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minute instruction in the operation of these machines may be regarded as quite unnecessary.

Ordinarily, the only work required of the operator is to guide the bags through the sewing machine; the goods being brought to the machine and carried away by another person. Obviously, practice will increase the proficiency of the operator in making straight seams, and in turning neat corners at the bottom of the bags where side and bottom seams are run in a continuous operation.

Jute Bags A double edge folder (Cat. No. 641) is sometimes used for turning back the two cut-edges. This folder is pivoted so that it can be swung out of position when the operator reaches the selvage part of the seam.

Bleached Bags Though the adjustment of the feed dog be perfect for other fabrics, some difficulty may be experienced in properly feeding bleached cotton fabric, due to the filler which it contains, as it tends to make the goods adhere to the under side of the presser foot. This difficulty can be easily remedied by the use of some solid lubricant, such as a mixture of equal parts of beeswax and tallow, placed on the upper surface of the presser foot in the form of a cone so as to cover the needle hole. In passing through this cone, the thread will carry sufficient lubricant to permit the fabric to pass freely under the presser foot. Whenever the machine begins to feed poorly, the cone of lubricant should be pinched together. The same result might be effected by dropping a small quantity of oil upon the upper

Directions

surface of the presser foot, or between the feed dog and the presser foot; but this might be objectionable because of the tendency to soil the work.

To Set the Needle

Place the needle as far up into the needle bar as it will go. The side which has a "spot" milled out of the groove just above the eye should be turned back towards the presser bar, so that the eye of the needle will be in line with the direction of the stitching. Then tighten the needle clamp nut with the wrench (Cat. No. 116) furnished for that purpose.

Threading

The threads should neither be twisted nor cross each other. Under no circumstances should the thread turn completely around the tension post in passing through the tension disc, nor should one thread pass through more than one tension.

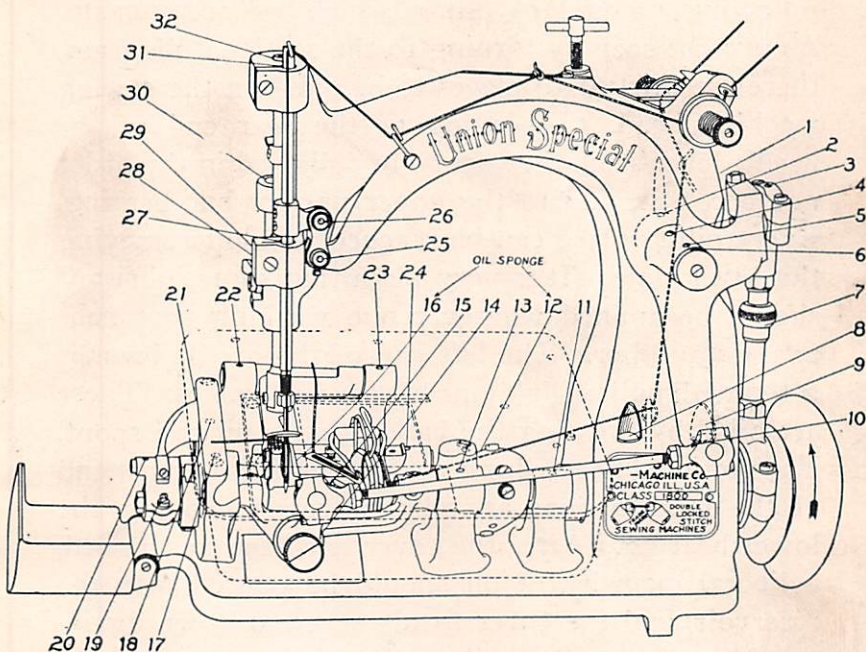
Styles 1800 A, 1800 C, 1900 A, 1900 D, 1900 F and 1900 H, being Single Needle Double Thread Stitch Machines, are threaded exactly as shown in the sectional diagram.

Styles 1800 B, 1800 D, 1900 B, 1900 G, and 1900 J, being Single Thread Stitch Machines, have no looper thread, but otherwise are threaded as shown in the sectional diagram.

Styles 1800 E and 1900 C are Double Needle Machines. The threads should not be twisted nor cross each other. A separate tension is provided for each of the needle threads, and also separate eyes in the needle lever thread eyelet. Neither of the needle threads should be passed under the thread take-up

SMALL ARM FLAT BED MACHINES—CLASSES 1800 & 1900

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SECTIONAL DIAGRAM, SHOWING THREADING AND OILING.

Directions

wire to the right of the upper needle bar bearing.

The looper is threaded exactly the same as Style 1800 A.

Oiling High speed machinery requires careful oiling with a good quality of oil that will not gum by friction-heat or air-exposure.

After long experience, we have come to use the following method of oiling which we recommend. As may be seen by turning to the sectional diagram, there are thirty-two places to be oiled on the sewing machine head. Beginning at the rear end of the needle lever stud, they are to be followed in the order numbered around to the upper presser bar bearing. Every oiling place can be reached without removing the cloth plate. It is very plain that some lubricant should be applied wherever one working part rubs against another. The left end of the needle lever is fitted with hollow link pins having ball valves. These are oiled by pressing the ball with the oil can spout. The sectional needle lever connection on the right end of the machine has an oil reservoir for oiling the lower bearing. After the cover has been unscrewed, a liberal quantity of oil should be poured into the reservoir, and the cover firmly screwed down again.

When systematically performed, oiling can be done without possibility of missing any place in a surprisingly short time.

Once an Hour Frequent oiling is necessary because dust, lint, and the filling substance used in preparing cotton cloth, absorbs the oil. The sewing machine head should be oiled every hour of operation. To prevent operators from over-

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looking this very important part of their work, the power should be shut off every hour for one minute's duration.

The power transmitter is lubricated with solid oil, through the hollow main shaft, from a single compression cup which should be tightened up about once a week. If it runs hot, the compression cup should be tightened up immediately. Refilling will not be required oftener than once in several months.

Cleaning Every time an operator oils a machine the overflowed oil and lint should be carefully wiped up. The dirt in the under part of the machine can be removed with the aid of a small brush through the opening between the frame and the apron of the cloth plate. Once each day, the cloth plate should be removed from the machine, and the mechanism should be given a thorough cleaning. Also, dirt and lint should be picked out of the oil holes.

The constant accumulation of lint, dirt and the filling substance used in cotton fabrics, makes it necessary for the operator to keep the machine as clean as possible in order to prevent rapid wear in the bearings.

Adjustment

Remark Where several machines are adjusted in the same way, they are considered together. Styles 1800 A and 1900 A are first considered as they are the most commonly used, and their

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mechanism embodies nearly all the features of the remaining styles.

Special directions for the differences in mechanism and stitch formation of the other machines are considered under proper headings.

The working parts of the mechanism can be readily uncovered by removing the cloth plate which is secured to the base by three screws, and the feed crank mechanism of all Class 1800 Machines is uncovered by a feed cap hinged so that it can be turned downwardly.

Useful Hints When a machine is in apparently good repair and fails to work satisfactorily, delay might generally be avoided by bearing in mind the following suggestions:

(1) Note carefully whether the machine is threaded as directed in every respect, especially at the tensions, and remove any lint which may have gathered between the discs.

(2) Examine the needle to see whether it sets straight and is inserted in the needle bar as far up as possible.

(3) Remove the needle and see whether it has become bent. The best possible proof is to roll it on a perfectly flat surface to note whether the point rolls true.

(4) Clean and oil the machine thoroughly. Try a new needle and carefully re-thread the machine.

(5) The throat plate needle hole may have become roughened so as to cause the breaking of both threads. This may be remedied by smoothing it out with a narrow strip of emery cloth.

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(6) If the foregoing measures fail to sufficiently improve the working of the machine, it may be assumed that some part needs repair or readjustment.

Caution Before operating by power, after any change has been made in the working parts, always turn the machine by hand in order to be sure that it runs freely, and that the working parts do not interfere with the frame or with each other.

Styles 1800 A and 1900 A

Description Each of these machines makes a single row of double thread stitches and is fitted with presser foot No. 65 X, throat plate No. 112 X and looper No. 26 X.

Stitch Formation In the formation of the single needle double thread stitch, the needle carries its thread down through the fabric and, as it begins to ascend, it throws out a loop at the rear which the looper enters with its thread from the right. While the needle is above the throat plate, the feed dog moves the fabric forward, the looper rocks across the path of the needle and returns toward the right, forming a triangular space—between the back of the looper, the looper thread on the left and the needle thread on the right—into which the needle descends with its thread. The looper, continuing to return towards the right, leaves the stitch on the needle. As the needle again ascends, the stitch is released from the needle, and tightened in the fabric by the action of the looper as it forms the next stitch.

Directions

NOTE—In adjusting the looper always use a new needle.

Looper

Begin adjusting the machine with the looper. It is of the greatest importance that the point of the looper should be exactly $5/16$ -inch to the right of the center of the needle when the needle bar is at its lowest point. A very convenient manner of securing an accurate adjustment will be found by using a gauge. (Cat. No. 21225-5/16) having a "V" slot, the center of which is $5/16$ -inch from the edge of the widest side, as indicated by the dotted lines in the cut below. This determines the distance

21225- $5/16$

between the center of the needle and the point of the looper. In using this gauge, hold it with the "V" slot enclosing the front of the needle, and the widest side of the gauge to the right. Then, the needle bar being at its lowest position, the looper point should be made to come even with the right edge of the gauge by turning the looper connection rod (Cat. No. 35) which is provided with right and left threads. The nuts of the looper connection rod should be tightened, when the looper moves to the left and its point is approximately $3/8$ -inch to the left of the center of the needle, in order to obviate any tendency of the ball joints to bind. Tighten the nut on the right first. After both nuts are tightened, make sure that the adjustment has not been altered, by again applying the looper gauge.

When the looper moves to the left to take the needle loop, it should have free space as it passes the back of the needle. Should it strike the needle, the

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result might be a broken needle, and often, a broken looper. If it be set as far away as $1/32$ -inch from the needle, skipped stitches would result. The best adjustment for average work is a scant $1/100$ -inch space between the looper point and the back of the needle. A spot is milled out of the groove just above the eye of the needle to permit the looper to pass quite closely without danger of striking. To change the position of the looper with respect to the back of the needle, loosen the two screws which secure the looper eccentric fork (Cat. No. 6 A) to the looper rock shaft (Cat. No. 31). This permits the looper and its rocker to be moved to the required position.

Needle Bar Turn the pulley in the direction indicated by the arrow on the sectional diagram till the looper starts to the left, and the looper point is even with the left side of the needle. Then, the needle bar should be set so that the entire eye of the needle appears below the under side of the looper. Some of the more elastic twines may require the needle bar to be set a little lower. However, it is not advisable to set it lower than $1/32$ -inch below the above-mentioned adjustment, as the needle would then throw out a large loop which would be too unsteady for the looper to enter, and skipped stitches would result.

Take-up, and Cast-off Wire About the middle of the main shaft is placed a device for controlling the looper thread.

Its action can be readily observed by threading the looper in the regular manner and holding the

Directions

thread taut by the end while the pulley is turned in the direction indicated by the arrow in the sectional diagram. It will be seen that the take-up serves a three-fold purpose,—(1) it takes up the looseness from the looper thread while the looper is receding from the needle loop; (2) it draws enough thread through the tension to allow it to complete its revolution; and (3) it holds the looper thread taut from the time it begins to take it up till the needle point descends just below the looper thread passing from the eye of the looper to the throat plate needle hole. Then, the lower prong of the cast-off wire should force the thread from the cut-away portion of the disc over the corner to the circular portion. The upper prong of the cast-off wire should retain the thread on the circular portion till the looper again moves to the left and requires more thread. Then, the thread should be entirely freed from the take-up. If the cut-away portion of the take-up fails to hold the thread taut until the point of the needle has descended below the looper thread, it is plain that the looseness of the thread would allow the machine to skip stitches. On the other hand, if the cut-away portion retained the thread till the needle point passed any considerable distance below the above mentioned adjustment, the looper thread would break under the increased strain.

Feed Dog In order to enable the machine to make a chain of stitches between the bags or, as it is commonly called, "to chain out," it is important to have the feed dog set at just the proper height above the throat plate. The surface of the throat plate is slightly inclined, the rear end being a

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trifle higher than the front. The two rear teeth of the feed dog, viewed from the left, should rise high enough above the surface of the throat plate to show about one-half of each tooth. To raise it higher, generally causes the teeth to hold the chain after the motion of the feed dog has been reversed and the chain fails to be properly fed out. The proper height is maintained by the supporting screw placed under the feed dog.

After the teeth have become too dull for further service, the feed dog, which is case hardened, can be annealed and re-sharpened. In the re-hardening process, it may be treated with cyanide of potassium. While the teeth should be sufficiently sharp to firmly hold the chain, it is quite possible to make them so undesirably sharp as to cut the stitches. A small triangular piece of oil stone will serve to remove the oversharpened edges from the teeth which come in contact with the chain. It should be applied to each of the rear teeth separately.

A shallow channel is milled out of the rear teeth to receive the chain of stitches and slightly protect it from the feed dog teeth. However, this channel should not be deep enough to allow the feed dog to come in contact with the goods, as that would result in the under ply of fabric being fed faster than the upper ply, and some grades of fabric, such as filled goods, would be defaced.

To Regulate Length of Stitch On the left end of the main shaft will be found the feed crank. It is by changing the position of this that the length of stitch can be altered.

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But, first, the feed crank stud lock nut must be loosened by turning it towards the left. For this purpose there is provided a screw driver wrench (Cat. No. 21206). It should be applied to the lock nut with the left hand while the machine pulley is held with the right hand. On the main shaft, a cap will be found secured by two small screws with a larger screw between. Turning this larger screw to the right raises the feed crank, thereby lengthening the stitch; turning it to the left lowers the feed crank, thereby shortening the stitch. Care must be taken not to move the feed crank below the center of the main shaft; for, having crossed the center, the motion of the feed dog would be reversed. Do not fail to tighten the lock nut after any change has been made.

Presser Foot

The needle hole in the presser foot should extend just far enough back of the needle to permit it to pass without being deflected.

Presser Spring

On the top of the sewing machine head near the center, will be found a thumb screw for regulating the pressure exerted on the presser foot. A good heavy pressure is required to enable the machine to feed properly.

Sewing Twine

As twine made for wrapping purposes is too uneven, it is not suitable for sewing. The size of the twine to be used will depend upon the class of bags to be made.

Directions

Tensions The importance of properly adjusted tensions on the thread can scarcely be overestimated. The needle thread should be under a tension about as tight as is consistent with the strength of the thread and the nature of the fabric to be sewed.

The looper thread should be under a tension, a trifle less than that of the needle thread.

Tight Tension On the needle thread, this would cause the machine to break the needle thread, and to pucker the fabric.

On the looper thread, it would cause breaking of the looper thread, and would prevent the machine from properly chaining out between the bags.

Loose Tension On the needle thread, this would cause loose and irregular stitches on the under side of the fabric; it would cause the machine to break the needle thread, to skip stitches, and it would prevent the machine from properly chaining out between the bags.

On the looper thread, loose tension would cause loose and irregular stitches on the under side of the fabric, skipped stitches, and the machine would fail to properly chain out between the bags.

Styles 1800 B and 1900 B

For complete adjustment, refer also to Style 1800 A.

Description Each of these machines makes a single row of single thread stitches, and is fitted with presser foot No. 65 X, throat plate No. 112 Y and looper No. 26 Y.

Directions

Several parts, including the take-up, cast-off wire and tension for the looper thread, are furnished to simplify a possible change for making the double thread stitch.

Stitch Formation In the formation of the single needle single thread stitch, the needle carries its thread down through the fabric and, as it begins to ascend, it throws out a loop at the rear which the looper enters from the right. While the needle is above the throat plate, the feed dog moves the fabric forward, the looper rocks across the path of the needle and, while returning, makes, with the loop retaining wire attached to the throat plate, a triangular formation of the loop into which the needle descends with its thread. The looper, continuing to return towards the right, leaves the stitch on the needle. As the needle again ascends, the stitch is released from the needle and tightened in the fabric by the action of the looper as it forms the next stitch.

Looper and Loop Retainer Two important factors in making the single thread stitch are (1) a notch cut in the under side of the looper, and (2) a small wire loop retainer attached to the under side of the throat plate.

The notch of the looper carries the bottom of the loop to the right while the loop retainer holds the upper part of the loop. Thus, the two, acting together, incline the needle loop into a nearly horizontal position so that the needle can readily descend into it.

Directions

No looper gauge can be specified for this machine, owing to the formation of the stitch. But, for convenience, the point of the looper can first be set $19/64$ -inch to the right of the center of the needle when the needle bar is at its lowest point. However, it will be plain that the looper must move just far enough past the needle to allow the notch to carry the front portion of the needle loop beyond the prong of the loop retainer. Should it pass too far, an excess of thread would be drawn through the tension and the loop would not be held sufficiently tight around the looper to enable the looper to properly incline the loop. If the looper did not move far enough to the left to carry the needle loop beyond the prong, the loop retainer would fail to perform its part of the work. Either of the above mentioned errors in adjustment would result in skipped stitches. If the looper fails to properly incline the loop when it has moved the required distance to the left, the angle of the notch should be increased. This can be easily done with emery cloth.

To raise the looper so that the upper edge will pass sufficiently close to the prong of the loop retainer, it is customary to place a small collar (Cat. No. 21210) on the looper shank.

The prong of the loop retainer should set so as to allow the upper edge of the looper to return as closely as possible under it without touching, and about as far forward as the screw will permit. However, when the looper moves to the left and the end of its notch is opposite the prong of the loop retainer, there should be sufficient space between the two to permit the heaviest thread to pass. Also, there must be sufficient space to permit the heaviest thread to pass between the prong of the loop retainer and the feed dog, otherwise the feed dog would be liable to pinch off the thread.

SMALL ARM FLAT BED MACHINES—CLASSES, 1800 & 1900

Directions

Feed Dog The feed dog should not be set quite so high above the throat plate as on Style 1800 A, otherwise the machine would fail to properly chain out between the bags.

Tension A comparatively loose tension is sufficient for this machine. It need be only tight enough to draw up the stitch to the under surface of the fabric.

Working of the Parts By turning the machine on its side, the various parts of the stitch-forming mechanism and the manner in which the thread is handled can be readily observed.

Style 1800 C

For complete adjustment, refer also to Style 1800 A.

Description This machine makes a single row of double thread stitches, and is fitted with presser foot No. 65 Y, throat plate No. 0112 and looper No. 26 X.

It is specially designed for seaming small pockets; and, to facilitate turning sharp corners, the feed surface is reduced.

A No. 6 needle is the largest that can be used without enlarging the throat plate needle hole.

A 3-ply twine is customarily used in both the needle and looper for sewing small pockets.

SMALL ARM FLAT BED MACHINES—CLASSES, 1800 & 1900

Directions

Adjustment The looper is set to the $\frac{9}{32}$ -inch looper gauge; but, in other respects, the adjustment is practically the same as Style 1800 A.

Style 1800 D

For complete adjustment, refer also to Styles 1800 A and 1800 B.

Description This machine makes a single row of single thread stitches, and is fitted with presser foot No. 65 Y, throat plate No. Q112 and looper No. 26 Y.

It is specially designed for seaming small pockets; and, to facilitate turning sharp corners, the feed surface is reduced.

A No. 6 needle is the largest that can be used without enlarging the throat plate needle hole.

A 3-ply twine is customarily used for sewing small pockets.

Adjustment The looper is set approximately to the $\frac{9}{32}$ -inch looper gauge; but, in other respects, the adjustment is practically the same as Style 1800 B.

Styles 1800 E and 1900 C

For complete adjustment, refer also to Style 1800 A.

Description Each of these machines makes a double row of stitches with two needles and one looper, and is fitted with presser

Directions

foot No. 65 Z, throat plate No. 112 Z and looper No. 26 X. They are specially designed for making large size, heavy bags where the maximum strength of seam is required.

Stitch Formation In the formation of the double needle stitch, the needles carry their threads down through the fabric and, as they begin to ascend, they throw out loops at the rear which the looper enters with its thread from the right. While the needles are above the throat plate, the feed dog moves the fabric forward, the looper rocks across the paths of the needles and returns toward the right, forming a triangular space—between the back of the looper, the looper thread on the left, and both needle threads on the right—into which the needles descend with their threads. The looper, continuing to return towards the right, leaves the stitch on the needles. As the needles again ascend, the stitch is released from the needles, and tightened in the fabric by the action of the looper as it forms the next stitch.

Thus, it will be plainly seen that the formation of the double needle stitch is practically the same as the single needle double thread stitch.

Looper The left-hand needle should be removed, as only the needle in the center of the needle bar should be used in applying the looper gauge. The looper should be set to the 9/32-inch looper gauge.

Needle Bar In placing the needle bar in the machine, one of the needle set screws must be turned to the rear and the other to the right

Directions

to prevent them from interfering with the threads. The needle bar should be set so that the needles are in a line parallel with the front side of the looper when its point is even with the left side of the left needle. This position is necessary in order to maintain the same space between the looper and each of the needles, as the looper moves forward to take the needle loops.

The vertical adjustment of the needle bar is determined by turning the pulley in the direction indicated by the arrow in the sectional diagram till the looper starts to the left and the looper point is even with the left side of the left needle. Then, the needle bar should be set so that the entire eye of the left needle appears below the under side of the looper. Some of the more elastic twines may require the needle bar to be set a little lower. However, it is not advisable to set it lower than 1/32-inch below the above mentioned adjustment, as the needles would then throw out large loops which would be too unsteady for the looper to enter.

To enable the looper to take each loop of needle thread at relatively the same height, the needle seats are arranged so that the left needle sets lower than the right needle.

Needles No. 8 needles should always be used, as the blade and shank are of the same diameter.

Needle Thread Take-up Near the upper needle bar bearing is placed a needle thread take-up wire. Its purpose is to counter-

Directions

act the elasticity of the twine so as to facilitate the quick formation of the loops.

In threading the machine, care should be taken to have the threads pass over this take-up wire instead of under it.

Style 1800 F

For complete adjustment, refer also to Style 1800 A.

Description This machine makes a single row of double thread stitches, and is fitted with presser foot No. 1827 A, throat plate No. 1828 and looper No. 26 X.

It is specially designed for sewing fringe and borders to rugs. The presser foot has a pilot extending in front to open the pile which, on returning to its original position, leaves the seam invisible.

By replacing the presser foot No. 1827 A with presser foot No. 65 X, a large number of operations in the manufacture of rugs and carpets can be most satisfactorily accomplished.

Intermittent Nipper Springs Attached to the take-up frame is a pair of nipper springs provided to assist the take-up. Just before the take-up discontinues to draw thread through the looper thread tension, the nipper springs should close and hold the thread taut, in order to ensure the take-up controlling that portion of the looper thread which has passed through the take-up thread eyelet instead of drawing additional thread through the tension.

SMALL ARM FLAT BED MACHINES—CLASSES, 1800 & 1900

Directions

The adjustment is made by means of a screw in the looper rocker frame which intermittently raises the lower spring.

Adjustment The looper is set to the 9/32-inch looper gauge; but, in other respects, the adjustment is the same as Style 1800 A.

Style 1900 D

For complete adjustment, refer also to Style 1800 A.

Description This machine makes a single row of double thread stitches up to one-half an inch in length, and is fitted with stationary presser foot No. 1920 D, throat plate No. 1924 E and looper No. 26 X. A top feed automatically adjusted with the bottom feed, is provided to facilitate the feeding of two or more plies of fabric together. This machine accomplishes a variety of bag seaming operations.

Adjustment The looper is set to the 9/32-inch looper gauge; but, in other respects, the adjustment is practically the same as Style 1800 A.

Styles 1900 F and 1900 H

For complete adjustment, refer also to Style 1800 A.

Description Each of these machines makes a single row of double thread stitches up to one-half an inch in length, and is fitted with presser

SMALL ARM FLAT BED MACHINES—CLASSES, 1800 & 1900

Directions

foot No. 65 X, throat plate No. 1924 and looper No. 26 X.

They are specially designed for hemming and seaming bags where an exceptionally long stitch is required.

Adjustment The looper is set to the $9/32$ -inch looper gauge; but, in other respects, the adjustment is the same as Style 1800 A.

Styles 1900 G and 1900 J

For complete adjustment, refer also to Styles 1800 A and 1800 B.

Description Each of these machines makes a single row of single thread stitches up to one-half an inch in length, and is fitted with presser foot No. 65 X, throat plate No. 1924 and looper No. 1908.

They are specially designed for hemming and seaming bags where an exceptionally long stitch is required.

Adjustment The looper is set approximately to the $13/32$ -inch looper gauge; but, in other respects, the adjustment is the same as Style 1800 B.

Power Transmitters

Description Improvements have been adopted from time to time. The model now offered is one fitted with ball bearing thrust collars

Directions

at the pulley hubs to reduce friction and to prevent excessive consumption of power.

Cleaning The transmitter shaft can be cleaned out from end to end by unscrewing the cup and plug which close the two ends.

Should the transmitter be taken apart for any reason, it would be advisable to remove the balls from the ball race and to thoroughly wash all the pieces; if an imperfect ball be found, it should be replaced by a new one. The ball race should then be refilled with our regular transmitter lubricant, or any high-grade solid oil. Grease from the interior of the shaft finds its way into the ball race through a groove in the ball retaining ring.

Assembling Care should be taken to see that the shaft is turned so that the oil holes will point towards the rear on a level with the center of the shaft. In line with the oil holes, a notch is ground in the shaft plug so that the oil holes can be readily located after the transmitter has been assembled.

Making Repairs

Extra Sizes Main shafts, rock shafts, presser bars, presser guide bars, and needle bars are made in extra sizes to be used where bearings have been worn.

Needle Lever Stud To compensate for wear, both large and small ends are tapered. Both ends are also made in extra sizes.

Directions

Unless otherwise specified for each end, in thousandths of an inch, standard sizes will be furnished.

Bushings Needle bar bearings of our latest machines are now fitted with bushings (Cat. No. 12873). Being retained in position by means of a clamp screw, they can be easily replaced when worn. The position of the needle bar will be more accurately maintained if the bushings when worn are replaced with new ones instead of reamed out for a larger size needle bar.

Where a manufacturer is provided with a reamer for the needle bar bearings, better results will be secured by ordering bushings, size .256-inch, to allow for a second reaming after the bushing has been clamped in the machine. In the absence of instructions with regard to reaming of bushings, they will be sent to fit the standard size needle bar, which is .257-inch.

Presser Foot Bottoms Though not illustrated separately in the catalogue, bottoms for the hinged presser feet can be furnished at a lower price than the complete presser foot.

Grinding in Joints Do not use emery for grinding in joints having one or more surfaces of soft metal because emery cannot be thoroughly washed out, and what is retained in the pores of the metal indefinitely continues the grinding process. Though slow in cutting, powdered oil stone can be entirely washed out and, therefore, safely recommended.

Directions

Where all surfaces are hard, as in the case of the looper rocker, looper rocker frame and looper rocker stud, emery can be advantageously used.

Assembling To maintain the machine pulley, take-up, looper eccentric, and feed lift cam, in their proper relation, the main shaft is spotted, and the positions of these parts must not be changed.

The machine pulley is secured to the shaft with two pointed set screws, one of which enters the spot at the right end of the shaft. Turning the machine pulley in the direction indicated by the arrow in the sectional diagram, the screw in the first hole coming into view must enter the spot in the shaft.

The looper eccentric and feed lift cam are placed on the shaft with the identification letter to the right.

The take-up should be placed on the shaft so that, when turned in the direction indicated by the arrow in the sectional diagram, the edges will rotate in the following order: (1) large cut-away, (2) circular, and (3) small cut-away.

The sectional needle lever connection (Cat. No. 1216) should be adjusted together, with the distance between centers 4-11/16 inches. This will provide the necessary clearance between the needle bar bearings.

The needle bar should be fitted in its bearings free enough to barely fall of its own weight.

The needle lever should be placed in position on the machine and tightened with the needle lever stud nut so that the left end of the lever barely falls of its own weight. If, after connecting the needle lever with the needle bar, it does not fall, obviously the lever is not in line. By withdrawing the needle bar,

Directions

the direction in which the needle lever requires to be bent can be readily seen.

Parts and Supplies

Terms Attention is directed to our established practice. Prices on machine parts and needles are strictly net. Leaving the factory in perfect condition, packed with skilful care, they are forwarded at the buyer's risk, **F. O. B.** Regular postage rates will be charged on all goods sent by mail.

Accessories The following tools are supplied gratis with each machine: A table screw $3\frac{1}{2}$ inches long, a screw driver wrench, a needle nut wrench, a looper connection rod nut wrench, a thread hook, a gauge with two thumb-screws, and an oil can. These may be duplicated at any time at the nominal charge fixed in the price list.

Stands for holding cones of sewing twine are not regularly shipped with machines; however, they can be supplied at the prices of the component parts listed in this catalogue.

Other supplies, including powdered oil stone, belting, oil in suitable cans, and grease for compression cups in convenient 5-pound pails, can be promptly furnished.

Catalogue The matter of this catalogue relates only to parts for our Small Arm Flat Bed Machines, Classes 1800 and 1900, and Power Transmitters. The class number can be ascertained by reference to the name plate on each machine.

Directions

Grouped together according to scale of reductions in each plate will be found illustrations of parts similar in appearance and, to some extent, component parts that go together in the same subdivisions of the mechanism.

Turning from the cuts to the price list, a description of the desired part and its principal uses will be found to give all the necessary information. Where a part is used in all machines in this catalogue, no specific use is mentioned in the description.

(‡) A double dagger indicates that the component parts cannot be furnished separately.

(*) Attention is called to the fact that parts marked with a star are not supplied to change machines from one style to another. These parts are only furnished for repairs, and then only upon the return of the broken or worn-out parts. We are forced to adopt this course to protect our customers and our patents from persons disposed to change low priced machines to machines of higher price.

Ordering Goods

If customers describe all the marks on a piece, errors will be avoided, and we will be enabled promptly to duplicate the desired parts.

A large number of the parts have the full catalogue number stamped upon them.

Other parts, difficult to distinguish, are marked, instead, with an identification letter.

Needles

Success in the operation of these machines can be assured only by the use of genuine Union Special Needles, furnished by the

15. 1.50
1.5

SMALL ARM FLAT BED MACHINES—CLASSES, 1800 & 1900

Directions

Union Special Machine Company. Obviously, it is to our interest to maintain the reputation of the machines by furnishing the very best needles obtainable.

To have orders promptly and accurately filled, the empty package, a sample needle, or a very care-



ROUND POINT, No. 2 BAG NEEDLES.

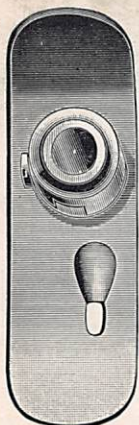
ful description should be given. The size is determined by the twine, but the needle cannot exceed the size of the needle hole in the Throat Plate. See marks on packages.

An intelligent order would read as follows: 100 needles No. 8, Round Point, No. 2 Bag.

Needle Prices

Round Point, No. 2 Bag—Nos. 6 and 8. . \$15.00 per M

Round Point, No. 2 Bag—Nos. 9 and 10. 20.00 per M



65 X



65 X E



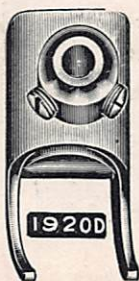
65 Z



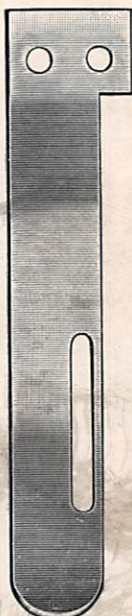
1827



1827 A



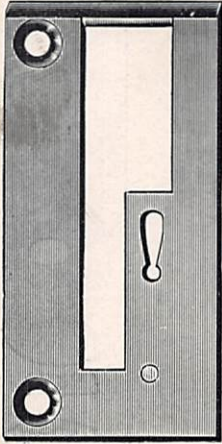
1920 D



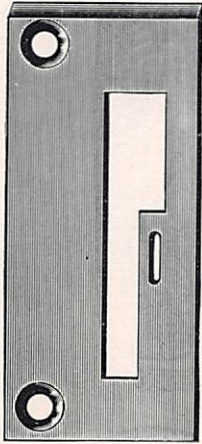
1949



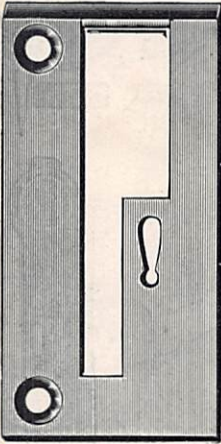
65 Y



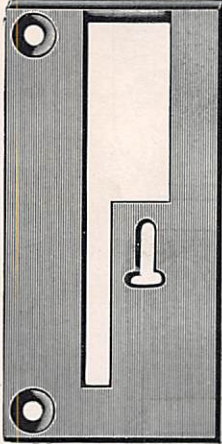
112 Y



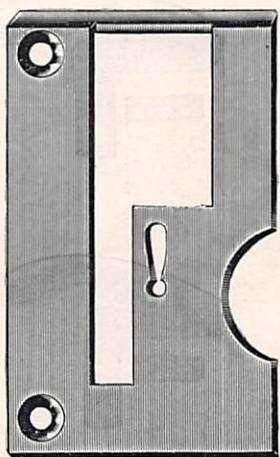
0 112



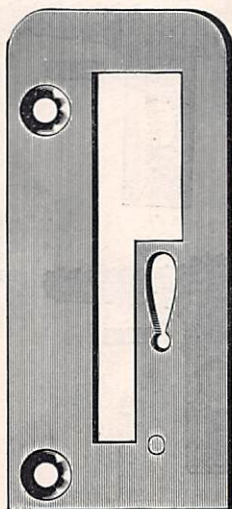
112 X



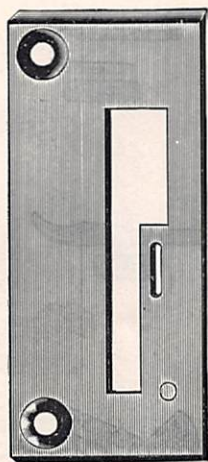
112 Z



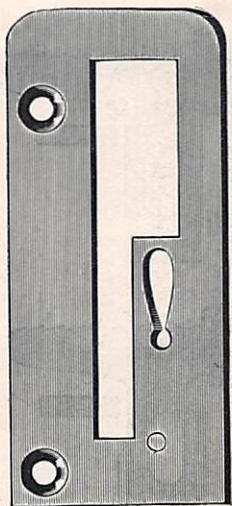
1828



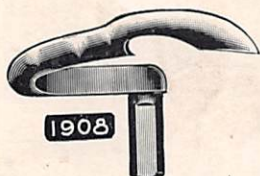
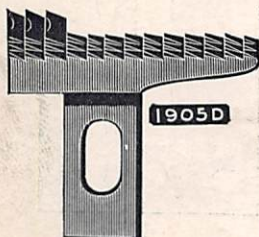
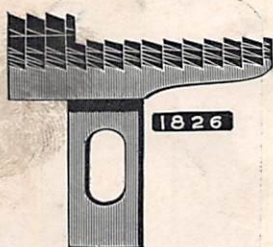
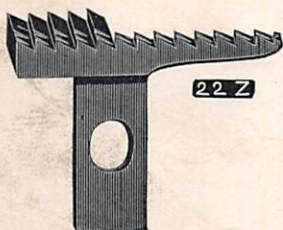
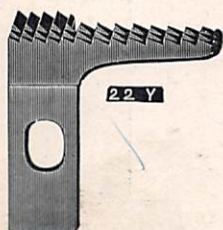
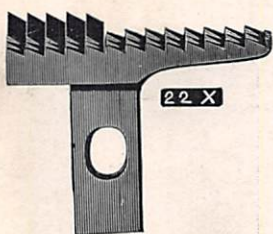
1924E



Q112



1924







94



93 A



22529



93



25 C



86



86 A



86 X



97



97 A



75



75 A



79



22569



74



85



22617 A



25



22587



82



22507



22508



22509



69.F.D



22511



22512



74.A



22510



17.X



6042



106



1346



49.A



156



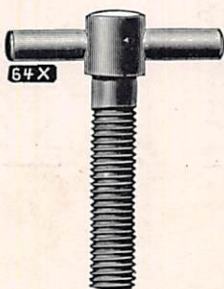
1878A



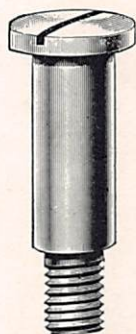
33



28509



64X



420



14



42.A



42



28617



1347



1943



1944



12873



110-3



28618



1286 B



28619



12964 C



18



34



37 L



37 R



47



15430 C



15430 D



1280



15430 H



108



21210



20



28577



15430 K



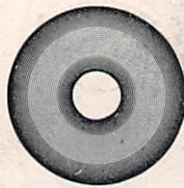
48



28611



1948



109

PLATE No. 48—One-half Size.





1331



2317.5



116



21388



21350



6 B



231



1941



A 44



154



64



61.X



36.L



36.R

70



10 X



1937



PLATE No. 51—One-half Size.

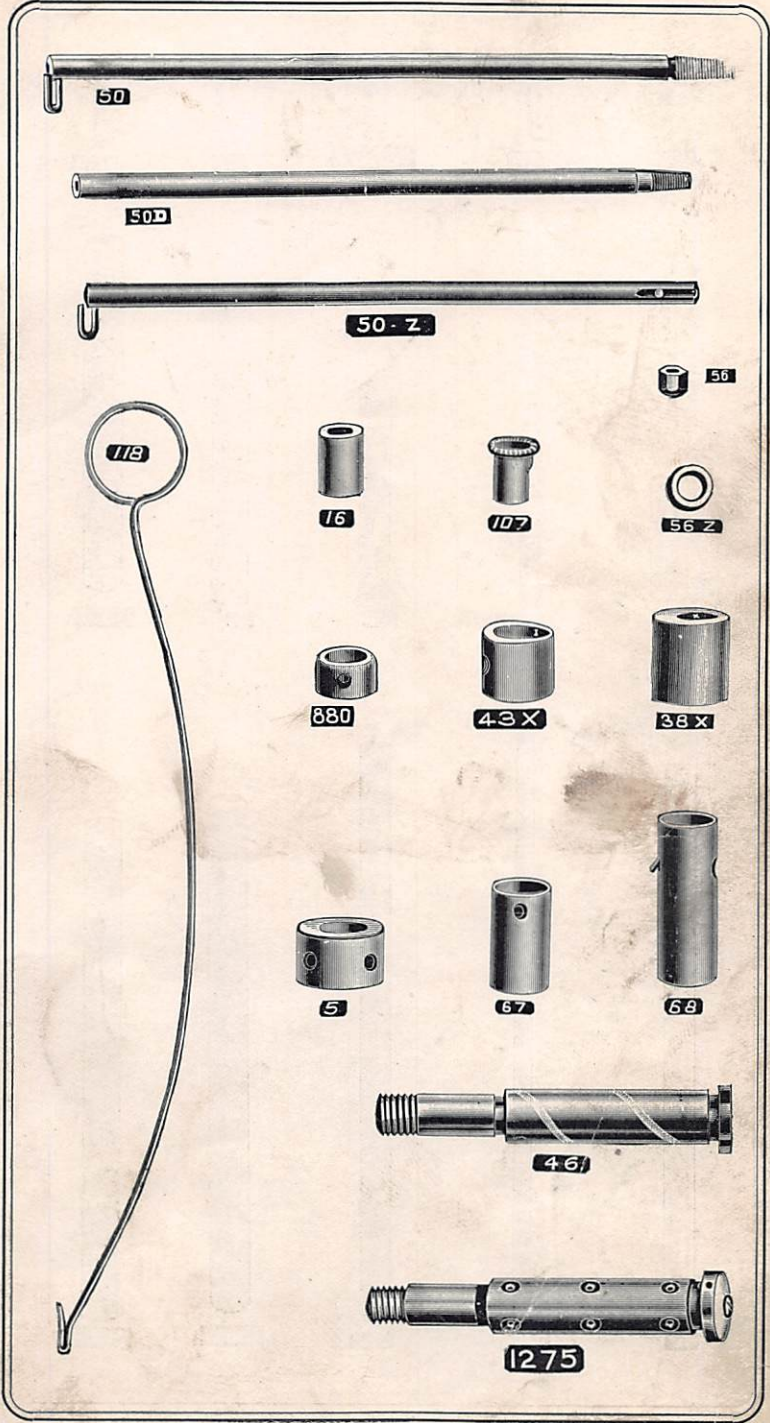
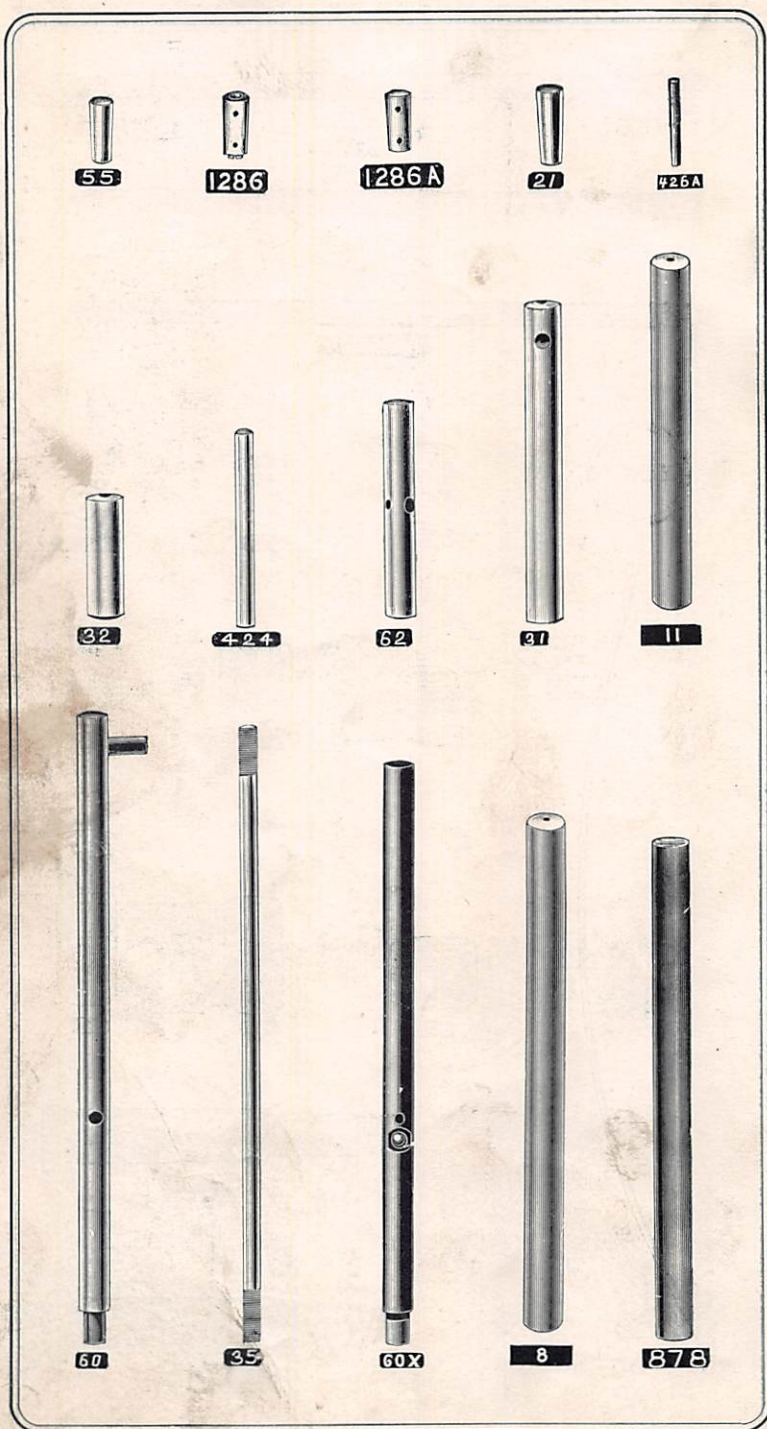


PLATE No. 52—One-half Size.





1940



19



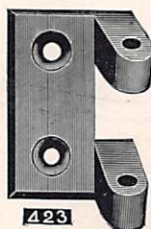
54



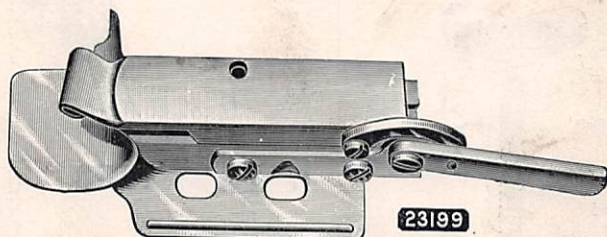
4 X



51



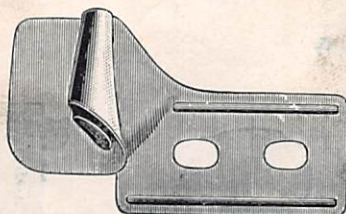
423



23199



24 X



23181



1802



1930



63X



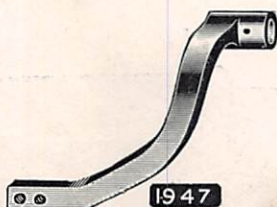
118A



12832 A



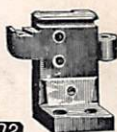
105



1947



63L



102



6A



1939



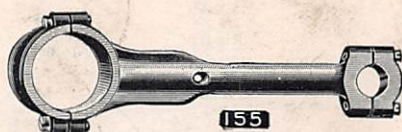
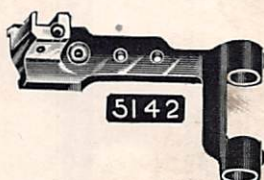
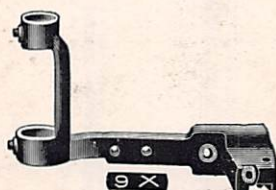
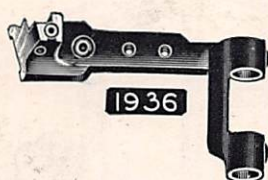
15

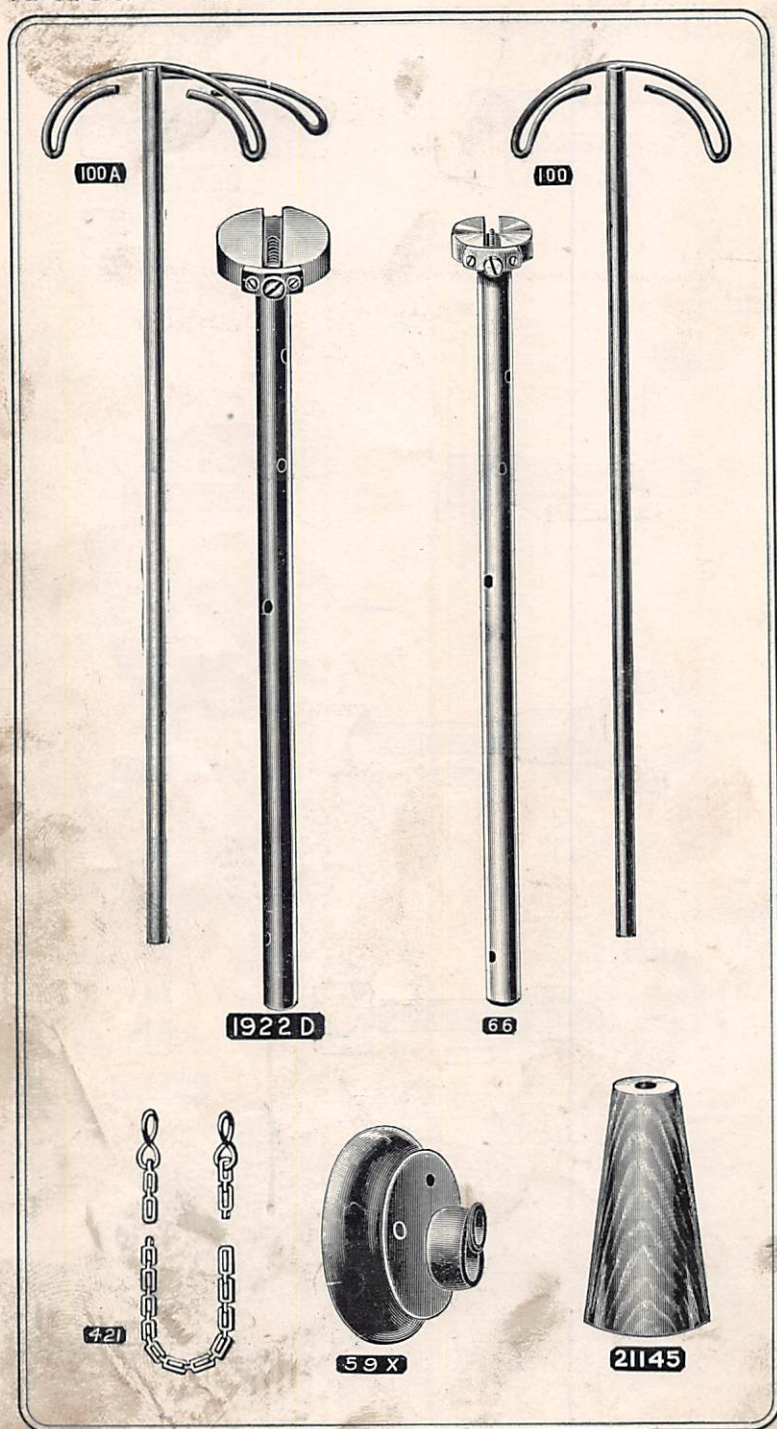


29



101







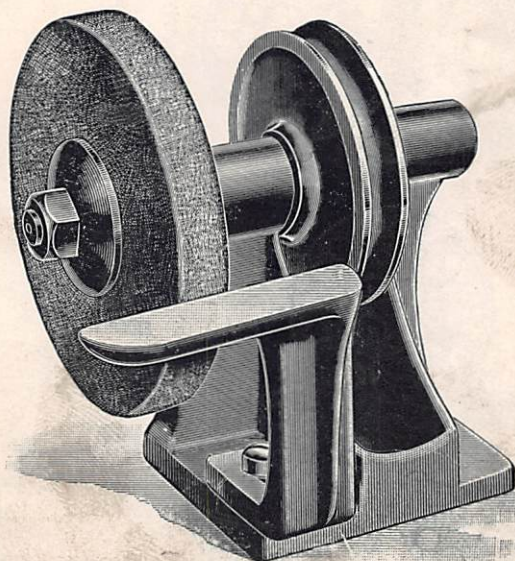
415



416A

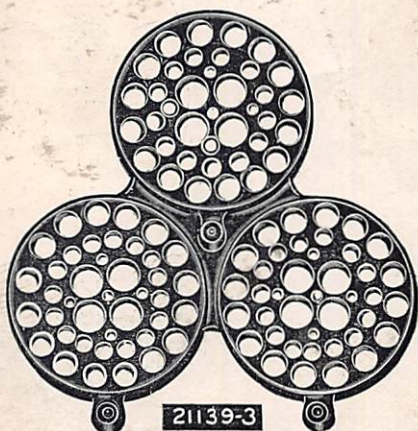
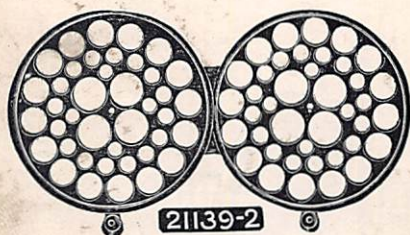
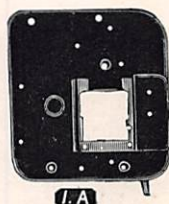
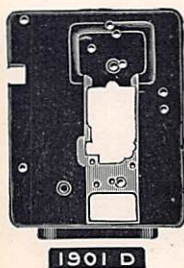


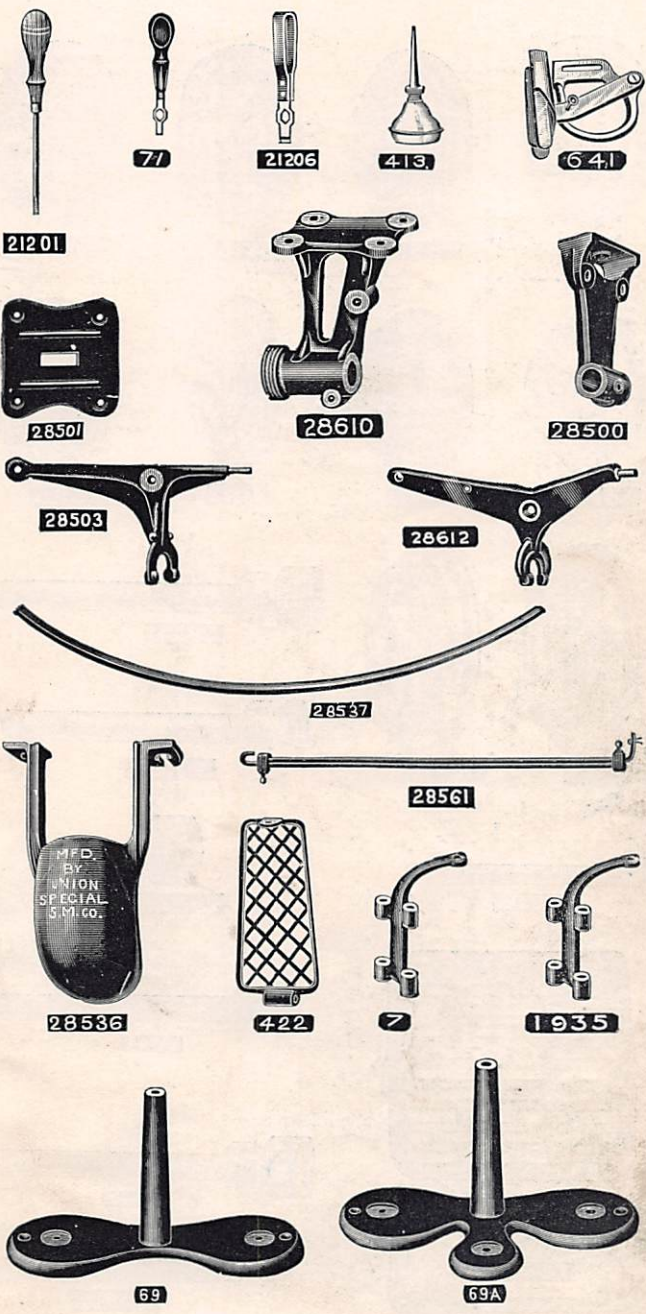
415B



21394

SMALL UTILITY GRINDER







28517



28512



28516



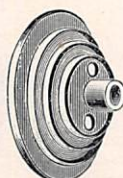
28511



28529



28526



28528



28525



28518



28513



28551



28552



28576



28549



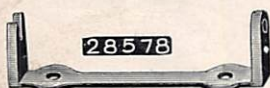
28575



28548



28547



28578



28615

SMALL ARM FLAT BED MACHINES—CLASSES 1800 & 1900

Parts For Sewing Machines

No. to order by.	Plate No.	Postage will be charged on all parts sent by mail. The figures in the second column refer only to the plates illustrating the parts, and are not to be used in ordering. TERMS ON PARTS. NET CASH.		Price per Part.
1 A	58	Cloth Plate, for machines with feed cap, maximum length of stitch $\frac{1}{8}$ inch.....		\$1 50
1 G	58	" " for machines without feed cap, maxi- mum length of stitch $\frac{1}{8}$ inch.....		2 50
	43	" " Screws No. 80.....		05
4 X	53	Cast-off Wire.....		30
	43	" " Screw No. 87.....		04
5	51	Collar, for main shaft.....		25
	43	" " Screws No. 95.....		03
6 A	54	Looper Eccentric Fork, with shoes.....		75
	44	" " " " Clamp Screw No. 85.....		05
	43	" " " " Set Screws No. 72.....		05
6 B	49	" " " " Shoe.....		10
	44	" " " " Fork Shoe Screw No. 94..		04
7	59	Feed Rocker, maximum length of stitch $\frac{1}{8}$ inch....		1 00
	43	" " Screws No. 88.....		03
8	52	" " Shaft ($5\frac{3}{8}$ inches long, hardened and ground) sizes .407, .408, .410, .413, .416		45
9 X	55	Feed Bar, maximum length of stitch $\frac{1}{8}$ inch.....		50
	43	" " Screws No. 88.....		03
10 A	—	" " Prong Sponge.....		02
10 X	49	" " Prong and Sponge, maximum length of stitch $\frac{1}{8}$ inch.....		20
	44	" " Prong Screws No. 94.....		04
11	52	" " Shaft ($3\frac{1}{8}$ inches long, hardened and ground) sizes .407, .408, .410.....		40
12	58	Feed Cap.....		30
13	50	" " Spring.....		10
	44	" " Spring Screw No. 94.....		04
14	46	" " Hinge Screw.....		10
15	54	Feed Crank (hardened) maximum length of stitch $\frac{1}{8}$ inch.....		40
	44	" " Screw No. 79.....		04
16	51	" " Ferrule (hardened and ground).....		30
17 X	45	" " Stud.....		25
18	47	" " Stud Nut, and for No. 36 R.....		10
19	53	" " Stud Cap, maximum length of stitch $\frac{1}{8}$ inch.....		15
	44	" " Stud Cap Screws No. 77.....		03
20	47	" " Stud Washer ($\frac{3}{8}$ inch hole).....		03
21	52	Feed Crank Pin (hardened and ground).....		10
	44	" " " " Screw No. 77.....		03
22 X	42	Feed Dog, for single needle bag machines, maximum length of stitch $\frac{1}{8}$ inch.....		35
22 Y	42	" " for single needle bag machines, maximum length of stitch $\frac{1}{8}$ inch, for seaming small cotton bags.....		50
22 Z	42	" " for double needle bag machines, maxi- mum length of stitch $\frac{1}{8}$ inch.....		45
	44	" " Screw No. 93.....		04
	44	" " Supporting Screw No. 97.....		04
23	49	Feed Bar Shoe (hardened) maximum length of stitch $\frac{1}{8}$ inch.....		15
	44	" " " " Screw No. 94.....		04

SMALL ARM FLAT BED MACHINES—CLASSES 1800 & 1900

Parts for Sewing Machines—Continued

No. to order by.	Plate No.	Postage will be charged on all parts sent by mail. The figures in the second column refer only to the plates illustrating the parts, and are not to be used in ordering. TERMS ON PARTS, NET CASH.	Price per Part.
24 X	53	Gauge.....	\$0 20
25	44	" " Screw, and for Nos. 641, 23116, 23153.....	15
25 C	44	Screw, for plate hemmers.....	08
26 X	42	Looper, for double thread stitch.....	1 00
26 Y	42	" " for single thread stitch, maximum length of stitch $\frac{1}{8}$ inch.....	80
	43	" " Set Screw No. 73.....	05
27 X	42	Loop Retainer, for single thread stitch, for use with throat plates Nos. 112 Y, Q112, and 1924 E.....	05
28	43	" " " Screw.....	04
29	54	Looper Rocker (hardened).....	1 00
30	55	" " " Frame (hardened).....	1 00
	43	" " " Frame Screw, left, No. 88.....	03
	43	" " " Frame Screw, right, No. 98.....	03
	43	" " " Frame Spot Screw No. 96.....	03
31	52	Looper Rock Shaft ($3\frac{1}{8}$ inches long, hardened and ground) sizes, .407, .408, .410, .413, .416.....	45
32	52	" " Shaft ($1\frac{1}{8}$ inches long, hardened and ground) sizes, .407, .408, .410, .413, .416.....	30
33	45	Looper Rocker Stud (hardened).....	35
34	47	" " " Nut.....	10
35	52	Looper Connection Rod.....	20
† 36 L	49	" " " " Ball Joint, left, complete..	1 25
† 36 R	49	" " " " Ball Joint, right, complete	1 25
	44	" " " " Ball Joint Screws No. 97 A	04
37 L	47	" " " " Nut, left thread.....	10
37 R	47	" " " " Nut, right thread.....	10
38 X	51	Looper Eccentric (ground, marked X).....	50
	43	" " " Screw No. 96.....	03
39	50	Tension Thread Eyelet, lower, for double needle machines.....	05
40	50	Lower Thread Eyelet.....	10
41 A	49	Presser Foot Lifter (hardened).....	30
	44	" " " " Screw No. 86.....	05
42	46	" " " " Pin.....	06
42 A	46	" " " " Screw Pin (hardened).....	10
43 X	51	Feed Lift Cam (hardened and ground, marked I) ..	35
	43	" " " " Screw No. 96.....	03
A 44	49	Needle Lever Washer ($\frac{3}{8}$ inch hole) for use with needle lever ball No. 49 A..	05
45	55	Needle Lever Connection, for use with needle lever ball Nos. 49 A and 1878 A	1 35
	44	" " " " Screws No. 75 A.....	04
45 A	—	Lower Cap, for needle lever connections Nos. 45 and 155.....	35
45 B	—	Upper Cap, for needle lever connection No. 45.....	25
	44	Cap Screws No. 75 A.....	04
46	51	Needle Lever Stud, solid (hardened and ground)...	1 00
47	47	" " " " Nut (hardened).....	20
48	47	" " " " Washer ($\frac{1}{8}$ inch hole).....	03

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No. to order by.	Plate No.	Postage will be charged on all parts sent by mail. The figures in the second column refer only to the plates illustrating the parts, and are not to be used in ordering. TERMS ON PARTS, NET CASH.	Price per Part.
49 A	45	Needle Lever Ball (hardened, diameter of shank $\frac{3}{4}$ inch) for use with needle lever connection No. 45.....	\$0 40
50	51	Needle Bar (hardened and ground) without eyelet screw hole, for single needle machines, sizes .257, .260, .263, .266, .270, .273, .276, .280, .283.....	1 00
50 D	51	" " (hardened and ground) with eyelet screw hole, for single needle machines, sizes .257, .260, .263, .266, .270, .273, .276, .280, .283.....	1 00
50 Z	51	" " (hardened and ground) for double needle machines, sizes .257, .260, .263, .266, .270, .273, .276, .280, .283.....	1 50
51	43	" " Set Screws No. 88.....	03
51	53	" " Connection, sizes .257, .260, .263, .266, .270, .273, .276, .280, .283.....	40
52 A	50	Needle Lever Thread Eyelet, for single needle machines.....	10
	43	" " " " Screw No. 98 A.....	04
53	50	Needle Bar Thread Eyelet, without screw hole, for needle bars Nos. 50 and 50 Z.....	04
53 A	50	" " " " with screw hole, for needle bar No. 50 D....	06
	43	" " " " Screw No. 87 U.....	04
54	53	Needle Bar Link (hardened).....	75
55	52	" " " " Pin, solid (hardened and ground).....	10
	43	" " " " Pin Screw, upper, No. 78.....	03
	43	" " " " Pin Screw, lower, No. 77.....	03
56	51	Needle Clamp Nut (hardened) for single needle machines.....	20
56 Z	51	Needle Clamp Collar, for double needle bag machines.....	40
	43	" " " " Screw No. 77 A.....	03
57	50	Nipper Spring, upper, for sewing fringe and border to rugs.....	10
58	50	" " lower, for sewing fringe and border to rugs.....	08
	43	" " " " Screw No. 90.....	04
59 X	56	Eccentric Pulley (marked 0).....	2 00
	43	" " " " Screws No. 22597.....	03
60	52	Presser Bar (hardened and ground) with lifter pin at top, sizes .319, .322, .325, .328, .331, .334.....	75
60 X	52	" " (hardened and ground) sizes .319, .322, .325, .328, .331, .334.....	75
61 X	49	" " Connection.....	35
	43	" " Connection Screws No. 77.....	03
	43	" " Connection Spot Screw No. 89.....	03
62	52	Presser Guide Bar (hardened and ground) sizes .319, .322, .325, .328, .331, .334.....	40
63 L	54	Presser Spring Lug.....	25
	44	" " " " Screws No. 74.....	05
63 X	54	Presser Spring.....	40

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64	49	Presser Spring Rest	\$0 50
	43	“ “ Rest Screw No. 88	03
64 X	46	“ “ Screw Regulator	20
65 X	39	Presser Foot, hinged, for single needle bag machines	55
	43	“ “ Set Screws No. 88	03
	44	“ “ Hinge Screw No. 86 X	08
65 XC	—	Bottom, for presser foot No. 65 X	30
65 XE	39	Presser Foot, solid, for single needle bag machines	75
65 Y	39	“ “ solid, for single needle bag machines, for seaming small cotton bags	75
65 Z	39	“ “ hinged, for double needle bag ma- chines	70
	43	“ “ Set Screws No. 88	03
	44	“ “ Hinge Screw No. 86 X	08
65ZA	—	Bottom, for presser foot No. 65 Z	45
66	56	Main Shaft (hardened and ground) for $\frac{7}{8}$ inch stitch, sizes .530, .531, .533, .536, 539	2 00
67	51	“ “ Sleeve ($1\frac{1}{8}$ inches long)	12
68	51	“ “ Sleeve ($1\frac{1}{8}$ inches long)	15
69	59	Spool Stand Base, for two 6 inch cones	60
69 A	59	“ “ “ for three 6 inch cones	75
	43	“ “ “ Screw No. 81	03
69 FB	58	Spool Stand Rod Connection	20
69 FC	58	“ “ “ Base	35
69 FD	45	“ “ “ Set Screw	02
69 S	58	Spool Pin (4 inches long for use with spool stand bases Nos. 69 and 69 A	10
70	49	Looper Eccentric Sponge Holder and Sponge	10
	44	“ “ “ Holder Screw No. 94	04
70 A	—	Looper Eccentric Sponge	02
71	59	Screw Driver Wrench, wood handle	10
72	43	Set Screw, for looper eccentric fork	05
73	43	“ “ “ for looper	05
74	44	Clamp Screw, fillister head, for needle lever and for No. 63 L	05
74 A	45	“ “ hexagon head, for needle lever	15
75	44	Screw ($\frac{9}{8}$ inch long) for needle lever connections ..	04
75 A	44	“ “ for needle lever connections Nos. 45 and 155	04
77	43	“ “ for feed crank stud cap, and for Nos. 21, 55, 61 X, 1286	03
77 A	43	Needle Set Screw, for double needle machines, and for No. 56 Z	03
78	43	Screw, for upper needle bar link pin	03
79	44	“ “ for feed crank	04
80	43	“ “ for cloth plates, and for No. 21389	05
81	43	“ “ for spool stand bases Nos. 69, 69 A	03
82	44	“ “ for stitch regulating	08
85	44	Clamp Screw, for looper eccentric fork	05
86	44	Screw, for presser foot lifters	05
86 A	44	“ “ large size, for presser foot lifters (tap No. 21513)	08
86 X	44	“ “ for presser foot hinge	08
87	43	“ “ for throat plates, and for No. 4 X	04

Parts For Sewing Machines—Continued

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87 U	43	Screw, for needle bar thread eyelet No. 53 A, and for No. 202 B.....	\$0 04
88	43	" for feed rocker, and for Nos. 9 X, 30, 50, 50 D, 50 Z, 64, 65 X, 65 XE, 65 Y, 65 Z, 880, 1827, 1827 A, 1920 D, 1936.....	03
89	43	" for take-up, and for No. 61 X.....	03
90	43	" for nipper springs.....	04
92	43	Cloth Plate Slide Stop Screw.....	04
93	44	Screw, for feed dogs, and for No. 102.....	04
93 A	44	" for feed dog, when used in conjunction with feed bar needle guard, and for Nos. 416A, 28505	04
94	44	" for feed bar shoe, and for Nos. 6 B, 10 X, 13, 70, 104, 1937, 28550.....	04
95	43	" for main shaft collar and for No. 21140.....	03
96	43	" for looper eccentric, and for Nos. 30, 43 X, 1806A	03
97	44	" for supporting feed dogs, and for Nos. 103, 1949	04
97 A	44	" for looper connection rod ball joints.....	04
98	43	" for looper rocker frame, and for Nos. 111, 424	03
98 A	43	" for needle lever thread eyelets.....	04
100	56	Spool Stand Thread Wire (14 inches long) for 2 threads, for use with spool stand base No. 69.....	30
100 A	56	" " " " (14 inches long) for three threads, for use with spool stand base No. 69 A.....	40
101	54	Take-up.....	75
	43	" Screw No. 89.....	03
102	54	Take-up Frame.....	50
	44	" Screws No. 93.....	04
103	50	Take-up Thread Eyelet.....	20
	44	" " " Regulating Screw No. 97..	04
104	50	" " " Spring.....	05
	44	" " " Spring Screw No. 94.....	04
105	54	Table Screw, 1½, 2½, 3, 3½, 4, 4½, 5, 5½ and 6 inches	15
106	45	Tension Post, solid.....	20
107	51	" Spring Ferrule.....	06
108	47	" Nut.....	05
109	47	" Disc (hardened).....	05
110-3	46	" Spring.....	04
111	50	Tension Thread Eyelet.....	10
	43	" " " Screw No. 98.....	03
112 X	40	Throat Plate, for single needle, double thread stitch bag machines, maximum length of stitch ½ inch (feed dog No. 22 X)....	35
112 Y	40	" " for single needle, single thread stitch bag machines, maximum length of stitch ½ inch (feed dog No. 22 X)....	45
112 Z	40	" " for double needle bag machines, maxi- mum length of stitch ½ inch (feed dog No. 22 Z).....	70
0112	40	" " for single needle, double thread stitch bag machines, maximum length of stitch ½ inch, for seaming small cotton bags (feed dog No. 22 Y).....	50

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Parts For Sewing Machines—Continued

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Q112	41	Throat Plate, for single needle, single thread stitch bag machines, maximum length of stitch $\frac{1}{4}$ inch, for seaming small cotton bags (feed dog No. 22 Y) Screws No. 87.....	\$0 60 04
113 A	50	Arm Thread Eyelet.....	08
	44	" " " Screw No. 22529.....	05
116	49	Wrench (hardened) for needle clamp nut.....	10
118	51	Thread Hook.....	05
118 A	54	" Tweezers.....	10
154	49	Needle Lever Washer ($\frac{3}{8}$ inch hole) for use with needle lever ball Nos. 156 and 1878 A.....	05
155	55	Needle Lever Connection, for use with needle lever ball No. 156.....	1 35
	44	" " " Screws No. 75 A.....	04
155 A	—	Upper Cap, for needle lever connection No. 155...	25
	44	" " Screws No. 75 A.....	04
156	45	Needle Lever Ball (hardened, diameter of shank $\frac{3}{8}$ inch) for use with needle lever connections Nos. 155 and 1216..	40
158 B	50	Needle Lever Thread Eyelet, for double needle bag machines.....	12
	43	" " " " Screw No. 98 A.....	04
187 A	43	Screw, for loop retainer No. 1911.....	04
202	50	Needle Thread Take-up, complete, for double needle bag machines..	50
202 A	50	" " " Wire Post, for double needle bag machines..	35
	44	" " " Wire, Post Screw No. 22529.....	05
202 B	50	" " " Wire, for double needle bag machines.....	08
	43	" " " Wire Screw No. 87 U	04
413	59	Oil Can, with spout.....	10
415	57	Foot Lift Lever, complete.....	75
415 B	57	" " Lever Arm Holder.....	40
416 A	57	" " Lever Arm.....	25
	44	" " Lever Arm Screws No. 93 A.....	04
420	46	" " Lever Stud.....	20
421	56	" " Chain (38 inches long).....	15
422	59	" " Treadle.....	20
423	53	" " Treadle Rest.....	15
424	52	" " Treadle Pin.....	05
	43	" " Treadle Pin Screw No. 98.....	03
426	50	" " Lever Spring.....	05
426 A	52	" " Lever Spring Pin.....	01
641	59	Double Edge Folder, for inside stitched bags (width of fold $\frac{3}{8}$ inch).....	4 00
	44	" " " Screws No. 25.....	15
878	62	Feed Bar Shaft ($4\frac{1}{4}$ inches long, hardened and ground) for top feed machines.....	50

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880	51	Feed Bar Shaft Collar, for top feed machines.....		\$0 25
	43	“ “ “ “ Screw No. 88.....		03
1215	58	Needle Lever (steel forging) for use with needle lever ball No. 49 A.....		2 00
1215 A	58	“ “ (steel forging) for use with needle lever balls Nos. 156 and 1878 A.....		2 00
1216	55	“ “ Connection, complete, with separable bearings and oil reservoir.....		3 00
1275	51	“ “ Stud, internal oiling, with end screw (hardened and ground).....		1 50
1275 A	—	“ “ Stud, internal oiling, without end screw (hardened and ground).....		1 45
	43	“ “ Stud End Screw No. 22586.....		05
1280	47	“ “ Bolt Nut.....		10
1286	52	Needle Bar Link Pin, complete, internal oiling (hard- ened and ground).....		30
	43	“ “ “ “ Screw, upper, No. 78.....		03
	43	“ “ “ “ Screw, lower, No. 77.....		03
1286 A	52	“ “ “ “ internal oiling without spring, ball or screw (hardened and ground).....		20
1286 B	46	“ “ “ “ Spring.....		04
	43	“ “ “ “ Spring Screw No. 22560.....		04
1331	49	Presser Foot Lifter, with projecting stop, engaging lifter screw pin, for use where bed casting is broken.....		55
	44	“ “ “ “ Screw No. 86.....		05
1346	45	Tension Post (length over all $1\frac{1}{4}$ inches) for use with hardened steel ferrule No. 1347.....		20
1347	46	“ “ Ferrule (length over all $\frac{1}{8}$ inch, hard- ened) for use with tension post No. 1346		08
1361	—	Presser Spring Pin.....		03
1362	—	Main Shaft Sleeve Pin.....		03
1802	53	Cloth Plate Slide, right.....		40
	43	“ “ “ “ Stop Screw No. 92.....		03
1806 A	—	Feed Lift Cam (hardened, marked BE) $\frac{1}{2}$ inch more throw than No. 43 X.....		80
	43	“ “ “ “ Screw No. 96.....		03
1825	42	Feed Bar Needle Guard (hardened, marked BQ)...		60
	44	“ “ “ “ Screw No. 94.....		04
1826	42	Feed Dog for single needle machines, for sewing fringe and border to rugs.....		90
	44	“ “ “ “ Screw No. 93.....		04
1827	39	Presser Foot, hinged, for single needle machines for heavy, open mesh material.....		1 25
1827 A	39	“ “ “ “ hinged, for single needle machines for sewing fringe and border to rugs.....		2 00
	43	“ “ “ “ Set Screws No. 88.....		03
	44	“ “ “ “ Hinge Screw No. 86 X.....		08
1828	41	Throat Plate, for single needle machines, for sew- ing fringe and border to rugs (feed dog No. 1826).....		1 25
	43	“ “ “ “ Screws No. 87.....		04

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1841 A	—	Feed Prong Shim ($\frac{1}{8}$ inch) for use with feed lift cam No. 1806 A.....	\$0 03
1855	—	Lower Tension Thread Guide Pin.....	01
1878 A	45	Needle Lever Ball (hardened, diameter of shank $\frac{3}{8}$ inch) for use with needle lever connection No. 45 (tap No. 21521).....	40
1901 D	58	Cloth Plate, for machines without feed cap, maxi- mum length of stitch $\frac{1}{2}$ inch.....	2 65
	43	“ “ Screws No. 80.....	05
1905 D	42	Feed Dog, for single needle bag machines, maxi- mum length of stitch $\frac{1}{2}$ inch.....	55
	44	“ “ Screw No. 93.....	04
1908	42	Looper, for single thread stitch, for use with throat plate No. 1924, maximum length of stitch $\frac{1}{2}$ inch.....	1 00
	43	“ “ Set Screw No. 73.....	05
1911	42	Loop Retainer (marked J) for single thread stitch, for use with throat plate No. 1924, maximum length of stitch $\frac{1}{2}$ inch....	15
	43	“ “ Screw No. 187 A.....	04
1920 D	39	Presser Foot, stationary, for top feed bag machines	1 45
	43	“ “ Screws No. 88.....	03
1922 D	56	Main Shaft (hardened and ground) maximum length of stitch $\frac{1}{2}$ inch, sizes .530, .531, .533, .536, .539.....	2 50
1924	41	Throat Plate, for single needle, single thread and double thread stitch machines, with- out top feed, maximum length of stitch $\frac{1}{2}$ inch (feed dog No. 1905 D)..	1 10
1924 E	41	“ “ for single needle, single thread and double thread stitch bag machines, with top feed, maximum length of stitch $\frac{1}{2}$ inch (feed dog No. 1905 D)	1 10
	43	“ “ Screws, No. 87.....	04
1926	—	Feed Dog, with coarse teeth cut 7 to the inch, for single needle bag machines, maximum length of stitch $\frac{1}{2}$ inch.....	70
	44	“ “ Screw No. 93.....	04
1930	53	Cloth Plate Slide, left, for machines without feed cap	40
1935	59	Feed Rocker, maximum length of stitch $\frac{1}{2}$ inch....	1 00
	43	“ “ Screws No. 88.....	03
1936	55	Feed Bar, maximum length of stitch $\frac{1}{2}$ inch.....	75
	43	“ “ Screws No. 88.....	03
1937	49	“ “ Prong and Sponge, maximum length of stitch $\frac{1}{2}$ inch.....	30
	44	“ “ Prong Screws No. 94.....	04
1939	54	Feed Crank (hardened) maximum length of stitch $\frac{1}{2}$ inch.....	55
	44	“ “ Screw No. 79.....	04
1940	53	“ “ Stud Cap, maximum length of stitch $\frac{1}{2}$ inch.....	15
	43	Feed Crank Stud Cap Screws No. 77.....	03

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1941	49	Feed Bar Shoe (hardened) maximum length of stitch		
		$\frac{1}{2}$ inch		\$0 20
	44	" " " Screw No. 94.....		04
1943	46	Presser Foot Roller, for top feed bag machines....		10
1944	46	" " " Axle, for top feed bag machines.....		03
1947	54	Top Feed Lever, for bag machines.....		1 75
1948	47	" " " Shaft Washer, for bag machines..		10
1949	39	" " " Sliding Foot for bag machines....		80
	44	" " " Sliding Foot Screws No. 97.....		04
5142	55	Feed Bar, for use with needle guard, maximum length of stitch $\frac{1}{2}$ inch		75
	43	" " Screws No. 88		03
6042	45	Needle Lever Bolt.....		20
12832 A	54	Presser Spring, arched, for use with foot lifter....		55
12873	46	Bushing (ground, $\frac{3}{8}$ inch long, external diameter $\frac{3}{8}$ inch) for needle bar bearings.....		25
	44	" Clamp Screw No. 22569		05
12964 C	46	Needle Bar Link Pin Spring Ball.....		02
15430	55	Needle Lever Connection Bearing, lower.....		75
	44	" " " Bearing Screws No. 22587		05
15430 C	47	" " " Check Nut, upper, left thread.....		10
15430 D	47	" " " Check Nut, lower, right thread.....		10
15430 E	55	" " " Bearing, upper.....		70
	44	" " " Bearing Screws No. 22587		05
15430 F	55	" " " Tube, with oil reservoir..		1 10
15430 H	47	" " " Oil Reservoir Cover.....		25
15430 K	47	" " " Oil Reservoir Leather Washer		02
21113 A	—	Spool Stand Thread Wire, lower piece (6 inches long)		05
21113 B	—	" " Thread Wire Coupling		15
	43	" " Thread Wire Coupling Screws No. 22558		04
21122	58	" " Rod, jointed, complete.....		60
21123	—	" " Rod (piece with coupling).....		35
21124	—	" " Rod (piece without coupling).....		25
21125	—	" " Rod Coupling.....		08
	45	" " Rod Set Screw No. 69 FD.....		02
21139	—	" " Top, for 8 inch cones.....		
21139-2	58	" " Top for 2 cones.....		1 00
21139-3	58	" " Top for 3 cones.....		1 50
	45	" " Top Screw, No. 22508.....		03
21140	58	Spool Stand Thread Wire, jointed, complete (22 in- ches long, for use with Nos. 21139-2, 21139-3... ..		35
	43	" " " " Screw No. 95		03
21140 A	—	" " " " (15 inches long) for use with Nos. 21139-2, 21139 3		10
21145	56	Wooden Cone for spool stand.....		10
21201	59	Screw Driver, round steel, diameter $\frac{5}{16}$ inch, length over all 9 inches.....		30
21202	—	" " round steel, diameter $\frac{7}{16}$ inch, length over all 10 $\frac{5}{16}$ inches.....		40

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21203	—	Screw Driver, round steel, diameter $\frac{7}{32}$ inch, length over all 15 inches.....		\$0 50
21204	—	“ “ round steel, diameter $\frac{1}{4}$ inch, length over all 15 inches.....		60
21205	—	“ “ octagon steel, diameter $\frac{5}{16}$ inch, length over all 15 inches.....		75
21206	59	“ “ Wrench, steel handle.....		15
21210	47	Looper Collar, for single thread stitch machines....		05
21225	—	Looper Gauge		
21225- $\frac{9}{32}$	—	“ “ $\frac{9}{32}$ inch.....		20
21225- $\frac{5}{16}$	—	“ “ $\frac{5}{16}$ inch.....		20
21225- $\frac{1}{2}$	—	“ “ $\frac{1}{2}$ inch.....		20
21350	49	Malleable Iron Belt Lacings, for 1 inch flat belt, per dozen.....		15
21351	—	Wire Belt Hooks, for $\frac{9}{32}$ inch round belt, per 100... ($\frac{1}{2}$ cent each in quantities less than 100)		30
21360	—	Bushing (ground, $\frac{1}{4}$ inch long, external diameters .319, .322, .325, .328) for needle bar bearings..		15
21361	—	“ (ground, $\frac{1}{4}$ inch long, external diameter .407) for presser guide bar bearings.....		10
21362	—	“ (ground $\frac{3}{8}$ inch long, external diameter .407) for presser bar upper bearing.....		15
21363	—	“ (ground, $1\frac{1}{8}$ inches long, external diameter .407) for presser bar lower bearing.....		20
21388	49	Wrench (hardened) for looper connection rod nuts, and for Nos. 18, 1280.....		15
21389	—	Lifter Lug.....		25
—	43	“ “ Screw, right No. 80.....		05
—	—	“ “ Screw, left No. 22524.....		05
21394	57	Grinder Frame, including emery wheel 5 inches diameter and $\frac{1}{4}$ inch face, unless otherwise specified, speed of wheel should be 3000 revolutions per minute.....		3 50
21400	—	Expansion Reamer, complete, for needle bar sizes .257, .260, .263, .266, .270, .273, .276.....		4 50
21408	—	“ “ complete for presser bar and presser guide bar, sizes .319, .322, .325, .328.....		5 50
21420	—	“ “ complete, for feed rocker shaft and feed bar shaft, sizes .407, .410, .413.....		6 00
21426	—	“ “ complete, for main shaft, sizes .530, .533, .536.....		7 50
21508	—	Tap (marked H2) for No. 22525.....		50
21509	—	“ (marked J2) for No. 22526.....		50
21513	—	“ (marked Q2) for No. 86 A.....		50
21518	—	“ (marked X2) for No. 22521.....		50
21521	—	“ (marked AB) for needle lever balls Nos.156 and 1878 A.....		1 00
22507	45	Set Screw, for transmitter brake lever shoe, and for No. 28562.....		03

SMALL ARM FLAT BED MACHINES—CLASSES 1800 & 1900

Parts For Sewing Machines—Continued

No. to order by.	Plate No.	Postage will be charged on all parts sent by mail. The figures in the second column refer only to the plates illustrating the parts, and are not to be used in ordering. TERMS ON PARTS, NET CASH.		Price per Part.
22508	45	Set Screw, for pulley guide transmitter brake lever spring, and for Nos. 21139-2, 21139-3, 28535.....		\$0 03
22509	45	“ “ for pulley guide and hub spring trans- mitter shafts.....		03
22510	45	Screw, for transmitter treadle adjustment, and for No. 28535.....		04
22511	45	“ (1 inch long) for split line shaft pulleys.....		03
22512	45	“ ($\frac{3}{4}$ inch long) for split line shaft pulleys.....		03
22521	43	“ large size, for cloth plates (tap No. 21518)...		08
22524	—	“ for lifter lug.....		05
22525	43	“ large size, diameter $\frac{5}{8}$ inch, for throat plate (tap No. 21508).....		05
22526	43	“ large size, diameter $\frac{3}{4}$ inch, for throat plate (tap No. 21509).....		05
22529	44	“ for arm thread eyelet, and for No. 202 A...		05
22539	—	“ for main shaft sponge hole.....		10
22558	43	“ for spool stand thread wire coupling.....		04
22560	43	“ for needle bar link pin spring.....		03
22561	43	“ for transmitter ball retaining ring.....		04
22566	—	Foot Lift Lever Stud, large size thread (tap No. 21519 A).....		25
22569	44	Clamp Screw, for needle bar bushing.....		05
22570	43	Screw, for compression cup friction pin, for ball bearing transmitter.....		05
22586	43	“ for needle lever stud.....		05
22587	44	“ for needle lever connection bearings Nos. 15430 and 15430 E.....		05
22597	43	“ for eccentric pulleys.....		03
22617 A	44	Clamp Screw, for ball bearing transmitter shaft....		10
23116	—	Double Edge Folder, complete, for inside stitched bags (width of fold 1 inch)...		6 00
23153	—	“ “ “ complete for outside stitched bags (width of fold $\frac{5}{8}$ inch)...		5 00
	44	“ “ “ Screws No. 25.....		15
23180	—	Plate Hemmer, $\frac{5}{8}$ inch wide, to turn hem on top, for hemming seamed bags.....		1 50
23181	53	“ “ $\frac{5}{8}$ inch wide, to turn hem on top, for hemming seamless bags.....		1 50
23199	58	“ “ complete, with lateral moving scroll, to turn $\frac{5}{8}$ inch hem on top, for hem- ming bags.....		7 50
	44	“ “ Screws No. 25 C.....		08

SMALL ARM FLAT BED MACHINES—CLASSES 1800 & 1900

Parts For Power Transmitters

"Pulley Guide Transmitter" designates a transmitter having pulley guides attached to the outside pulley hubs.

"Hub Spring Transmitter" designates a transmitter without the above mentioned pulley guides, the pulleys being held apart by a spiral spring encircling the two inside pulley hubs.

"Ball Bearing Transmitter" designates a transmitter having ball bearing thrust collars. This transmitter also has the hub spring encircling the two inside pulley hubs.

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28500	59	Bracket, for pulley guide and hub spring transmitters	\$0 40
28501	59	" Plate, for pulley guide and hub spring transmitters	25
28502	48	" Bolt and Nut, for pulley guide and hub spring transmitters	10
28503	59	Brake Lever, for pulley guide and hub spring transmitters	20
28504	50	" " Spring, for pulley guide transmitter	03
	45	" " Spring Screw No. 22508	03
28505	50	" " Spring, for hub spring and ball bearing transmitters	03
	44	" " Spring Screws, for ball bearing transmitter No. 93 A	04
28506	48	" " Shoe, for pulley guide and hub spring transmitters	15
	45	" " Shoe Set Screw No. 22507	03
28507	48	" " Friction Collar, for pulley guide transmitter	10
28508	48	" " Friction Collar, for hub spring transmitter	10
28509	46	" " Stud	05
28511	60	Brake Pulley, one speed, for pulley guide transmitter	1 00
28512	60	" " three speed, for pulley guide transmitter	1 00
28513	60	" " one speed, 10 inches diameter, for pulley guide transmitter	1 25
28516	60	" " one speed, for hub spring and ball bearing transmitters	1 00
28517	60	" " three speed, for hub spring and ball bearing transmitters	1 00
28518	60	" " one speed, 10 inches diameter, for hub spring and ball bearing transmitters	1 25
28525	60	Loose Pulley, round belt, for pulley guide transmitter	1 00
28526	60	" " flat belt, for pulley guide transmitter	1 00
28528	60	" " round belt, for hub spring and ball bearing transmitters	1 00
28529	60	" " flat belt, for hub spring and ball bearing transmitters	1 00
28535	48	Pulley Guide	05
	45	" " Screw, left, No. 22508	03
	45	" " " right, No. 22510	04

SMALL ARM FLAT BED MACHINES—CLASSES 1800 & 1900

Parts For Power Transmitters—Continued

No. to order by.	Plate No.	Postage will be charged on all parts sent by mail. The figures in the second column refer only to the plates illustrating the parts, and are not to be used in ordering. TERMS ON PARTS, NET CASH.	Price per Part.
28536	59	Pulley Guard.....	\$0 30
28537	59	Friction Leather.....	10
28538	50	Hub Spring.....	20
28540	48	" " Washer.....	04
28542	48	Shaft Washer, for pulley guide and hub spring transmitter.....	03
28547	60	Shaft (ground) complete, with compression cup, for pulley guide transmitter.....	1 00
28548	60	" (ground) without compression cup, for pulley guide transmitter.....	75
	45	" Set Screw No. 22509.....	03
28549	60	Compression Cup.....	15
28550	50	" " Spring.....	06
	44	" " Spring Screw No. 94.....	04
28551	60	Shaft (ground) complete, with compression cup, for hub spring transmitter.....	1 00
28552	60	" (ground) without compression cup, for hub spring transmitter.....	75
	45	" Set Screw No. 22509.....	03
28561	59	Pitman, complete, with two castings.....	40
28562	50	" Casting.....	10
	45	" Casting Screw No. 22507.....	03
28563	50	" Spring Cotter.....	03
28575	60	Treadle.....	40
28576	60	" Adjustment.....	10
	45	" Adjustment Screw No. 22510.....	04
28577	47	" Adjustment Screw Washer.....	01
28578	60	" Rest.....	15
28585	—	Nos. 28575, 22510, 28576 and 28577, assembled.....	55
28600	—	Round Belt Line Shaft Pulley (state diameter and bore; 1 $\frac{3}{8}$ inch bore unless otherwise specified.)	
28600-12	—	Round Belt Pulley, 12 inches diameter.....	75
28601	—	Flat Belt Line Shaft Pulley, 1 $\frac{1}{2}$ inch face (state diameter and bore; 1 $\frac{3}{8}$ inch bore unless otherwise specified.)	
28601-8	—	Flat Belt Pulley, 8 inches diameter.....	75
28601-9	—	" " " 9 inches diameter.....	75
28601-10	—	" " " 10 inches diameter.....	75
28601-11	—	" " " 11 inches diameter.....	1 00
28601-12	—	" " " 12 inches diameter.....	1 00
28601-13	—	" " " 13 inches diameter.....	1 00
28601-14	—	" " " 14 inches diameter.....	1 00
28601-15	—	" " " 15 inches diameter.....	1 00
	45	Pulley Screw (1 inch long) No. 22511.....	03
	45	" (1 $\frac{3}{8}$ inch long) No. 22512.....	03
28604	—	Transmitter Lubricant, 5 lb. package.....	75
28605	—	Adjustable Floor Stand, for 1 $\frac{3}{8}$ inch shaft.....	1 50
28610	59	Frame, for ball bearing transmitter.....	90

SMALL ARM FLAT BED MACHINES—CLASSES 1800 & 1900

Parts For Power Transmitters—Continued

No. to order by.	Plate No.	Postage will be charged on all parts sent by mail. The figures in the second column refer only to the plates illustrating the parts, and are not to be used in ordering. TERMS ON PARTS, NET CASH.	Price per Part.
28611	47	Frame Washer, for shaft clamp screw, for ball bearing transmitter.....	\$0 01
28612	59	Brake Lever, for ball bearing transmitter.....	25
28613	48	“ “ Shoe, for ball bearing transmitter...	15
	45	“ “ Shoe Set Screw No. 22507.....	03
28614	—	Shaft (hardened and ground) complete with plug, for ball bearing transmitter.....	70
28615	60	“ (hardened and ground) without plug, for ball bearing transmitter.....	60
	44	“ Clamp Screw No. 22617 A.....	10
28616	48	“ Plug, for ball bearing transmitter.....	10
28617	46	Compression Cup Friction Pin, for ball bearing transmitter.....	03
	43	“ “ “ “ Screw No. 22570	05
28618	46	“ “ “ “ Spring, for ball bearing transmitter.....	01
28619	46	Ball, for ball bearing transmitter.....	01
28620	48	“ Race, for ball bearing transmitter.....	20
28621	48	“ Retaining Ring, for ball bearing transmitter	15
	43	“ Retaining Ring Screws No. 22561.....	04
28622	—	“ Race, complete, for ball bearing transmitter (includes one each Nos. 28620, 28621, two No. 22561 and twenty-two No. 28619.....	65

Assembled Parts.

29054	—	Nos. 59 X, 45 and 49 A, assembled and lapped together.....	4 25
29055	—	Nos. 59 X, 155 and 156, assembled and lapped together.....	4 25
29055 A	—	Nos. 59 X and 15430, assembled and lapped together.....	3 00
29065	—	Nos. 45 and 49 A, assembled and lapped together..	2 00
29066	—	Nos. 155 and 156, assembled and lapped together..	2 00
29066 A	—	Nos. 156 and 15430 E, assembled and lapped together.....	1 35
29300	—	Nos. 1215 and 46, assembled and lapped together..	3 25
29300 A	—	Nos. 1215 A and 46, assembled and lapped together	3 25
29300 B	—	Nos. 1215 A and 1275 A, assembled and lapped together.....	3 70
29402	—	Nos. 422, 98, 423 and 424, assembled.....	40